KIT PUERTA CORREDERA

Manual de usuario

MODELO 400





INCLUYE TODO LO NECESARIO

PARA AUTOMATIZAR

UNA PUERTA CORREDERA

INDICE

ADVERTENCIAS IMPORTANTES

ANTES DE PROCEDER EN LAS INSTALLACION Y LA PROGRAMMACION ES ACONSEJABLE LEER DETENIDAMENTE LAS INSTRUCCIONES.

LA AUTOMATIZACION DEBE SER REALIZADA EN CONFORMIDAD A LAS VIGENTES NORMATIVAS EUROPEAS:
EN 60204-1 (Seguridad de la maquinaria. Equipamiento electrico de las maquinas, partes 1: reglas generales).
EN 12445 (Seguridad en el uso de cierres automatizados, metodos de prueba)
EN 12453 (Seguridad en el uso de cierres automatizados, requisitos)

• El instalador debe proveer la instalación de un dispositivo (ej. interruptor magnetotérmico) que asegure el seccionamiento omnipolar del aparato de la red de alimentación. La normativa requiere una separación de los contactos de almenos 3 mm en cada polo (EN 60335-1).

• Para la conexión de tubos rígidos o flexibles y pasacables, utilizar manguitos conformes al grado de protección IP55 como la caja de plástico que contiene la placa.

• La instalación requiere competencias en el campo eléctrico y mecánico; debe ser realizada únicamente por personal cualificado en grado de expedir la declaración de conformidad en la instalación (Directiva máquinas 98/37/EEC, anexo IIA).

• Es obligatorio atenerse a las siguientes normas para cierres automatizados con paso de vehículos: EN 12453, EN 12445, EN 12978 y a las eventuales prescripciones nacionales.

• Incluso la instalación eléctrica antes de la automatización debe responder a las vigentes normativas y estar realizada correctamente. El fabricante no se hace responsable en el caso de que la instalación no responda con las normativas vigentes.

• La regulación de la fuerza de empuje de la hoja debe medirse con un instrumento adecuado y regulada de acuerdo con los valores máximos admitidos por la normativa EN 12453.

• Está prohibida la utilización del motor en ambientes polvorientos y atmósferas salinas o explosivas.

El fabricante se reserva el derecho de aportar eventuales modificaciones al producto sin previo aviso; además, no se hace responsable de danos a personas o cosas debidos a un uso impropio o a una instalación errónea.

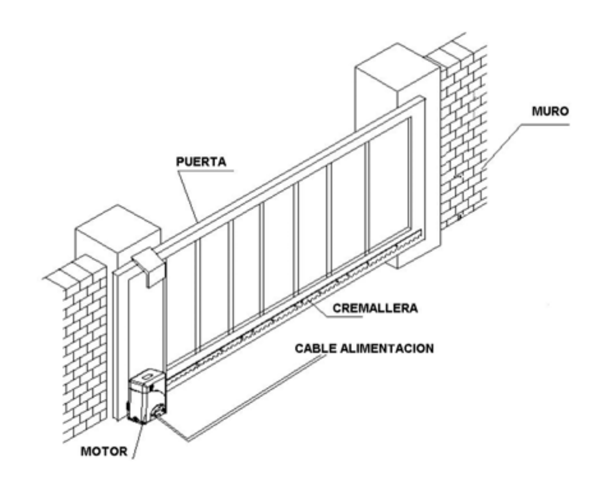
ESPECIFICACIONES TECNICAS

MOTOR CORREDERA 400		Mandos a distancia	
Alimentacion	220V. 50Hz	Frequencia	433.92 MHz
Velocidad	13 m/min	Tipo de emisor	rolling code
Potencia motor	200 W	Alimentacion	PILA 12V. modelo 27A
Altura piñon salida	58.5 mm	FOTOCELULA	
Peso máximo puerta	400 Kg	Tecnologia	Infrarojos (940nm.)
Par de salida	16 Nm.	Alcance	10 metros
Final de carrera	Contacto mecánico	Alimentacion	12 a 24 V. DC/AC
Ruido	≤58 dB	Consumo	15mA.(RX) 30mA.(TX)
Frecuencia de uso	15 minutos	Relé de salida	1A. 30V.
Maximo numero emisores	20	Dimensiones	49.2 x 76 x 21.6mm
Temperatura ambiente	-20°C~+50°C		

INSTALACION

El motor PY600AC puede mover puertas correderas de hasta 400 kilos d peso y 4 metros de longitud si se instala correctamente.

El motor actua mediante una guia dentada (cremallera) que se coloca a lo largo de la puerta. La figura adjunta muestra el aspecto final de la instalación.

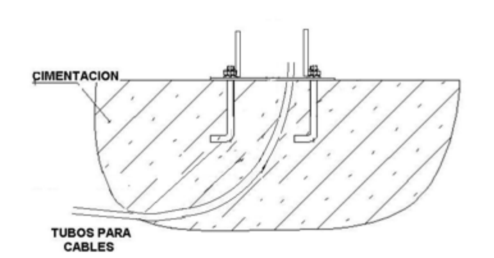


Preparación de la puerta

Antes de instalar el motor asegurese de que la puerta se mueve con suavidad, esta bien nivelada y no hay obstáculos que dificulten el movimiento.
La fuerza necesaria para mover la puerta debe ser uniforme en todo el recorrido.
El motor no de puede instalar en puertas en pendiente.

Cimentación

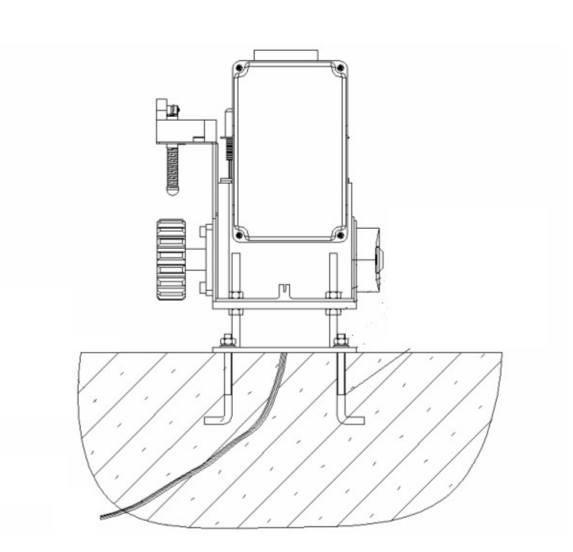
El motor requiere una base sólida de hormigon para asegurar su estabilidad.
La base de hormigon debe ser de al menos 450 x 300 milñimtros y con 200 mm. de profundidad.
Se debe preveer tubos para paso de cables de alimentación del motor y para la instalación de fotocélulas u otros accesorios.



Hechar el hormigón en el agujero y colocar la placa de fijación con las piezas de anclaje en ángulo suministradas. Usar tuercas M8 para que las piezas de anclaje no se hundan en el hormigon

ATENCIÒN: Controlar que la placa este bien nivelada y paralela a la puerta

La placa debe quedar a 70 milímetros de la puerta

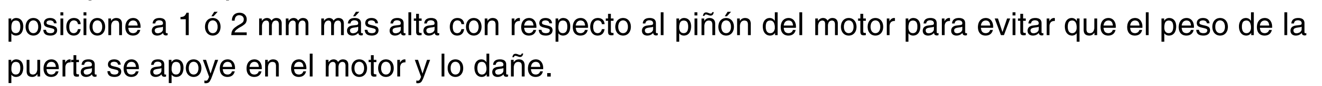


Cuando el hormigon haya fraguado completamente colocar el motor sobre la placa de anclaje y fijarlo con tuercas M8.
El uso de la placa de fijación permite ajustar la altura del motor si fuera necesario.

Opcionalmente, si el suelo es suficientemente sólido se puede fijar la placa de anclaje al suelo con espirros metálicos u otro sistema adecuado para el tipo de suelo.

<u>Instalación de la cremallera</u>

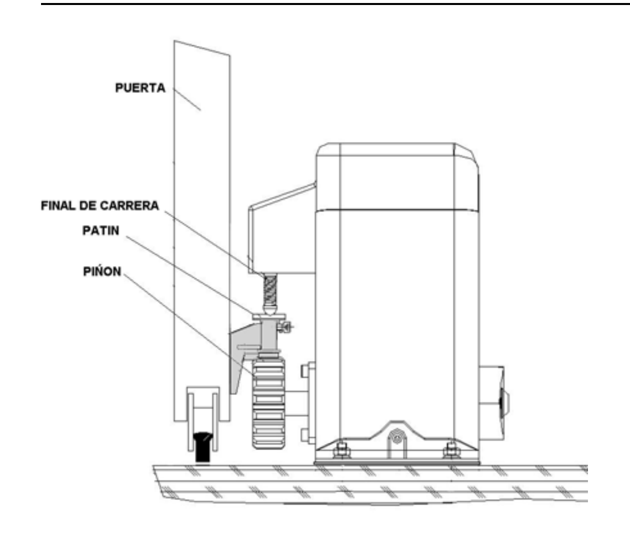
Desbloquear el motor como se indica en el apartado *funcionamiento manual* del final de este capítulo y posicionar la puerta en posición totalmente abierta.
Fijar todos los elementos de la cremallera a la puerta, teniendo el cuidado de mantenerla toda al mismo nivel, con respecto al piñón del motor.
Es importante que la cremallera se posicione a 1 ó 2 mm más alta con respecto al piñón del motor para evitar que el peso de la puerta se apoye en el motor y lo dañe.
Para verificarlo desbloquear el motor y comprobar que el piñón tioene un ligero juego respecto a la cremallera en todo el recorrido.



<u>Instalación de los finales de carrera</u>



Instale los patines de final de carrera sobre la cremallera como se muestra en la imagen, de manera que actuen sobre el muelle del motor en la posición en que el motor debe parar.
Tenga en cuenta que la puerta puede moverse algunos centímetros por la inercia adquirida



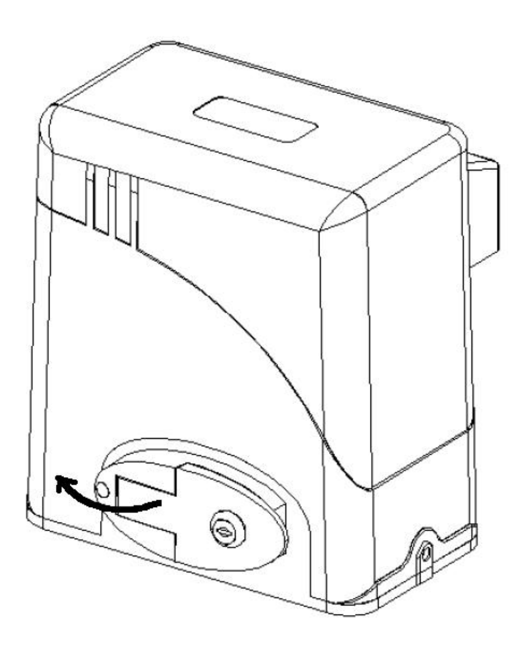
despues de que el motor deje de empujar. Ajuste los finales de carrera unos centímetros antes del punto de parada deseado.

ATENCION : aunque los finales de carrera detienen el movimiento del motor la puerta debe tener un tope mecánico que impida que se pueda salir de la guia.

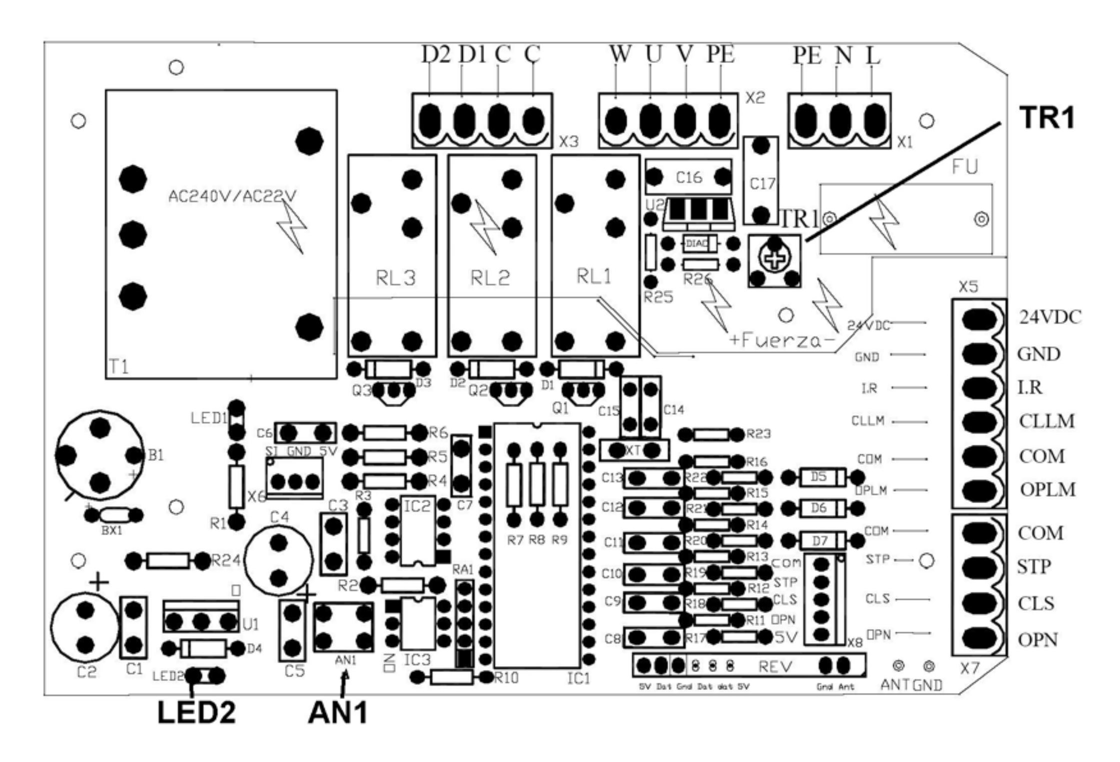
Funcionamiento manual

En caso de falta de suministro eléctrico use la llave suministrada para desbloquear la palanca del frente del motor.
Tire de la palanca hasta que quede a 90 grados de su posición inicial.

NOTA : si la puerta choca con fuerza con el marco o el tope mecánico de apertura puede quedar agarrotada y el motor no ser capaz de moverla. En este caso desbloqueela y nuevala manualmente. Verifique los finales de carrera y si es necesario moverlos para que actuen antes.



CONEXIONES ELECTRICAS



CONECTOR X1 alimentacion
L - Fase 230V.
N - Neutro 230V.
PE - Tierra

CONECTOR X2 motor, precableado en fabrica.
Conexiones: tierra (PE), comun de motor (V), y conexiones de direccion demotor (U y W).

CONECTOR X3 condensador (C C) precableado de fábrica y luz de aviso.
Se puede conectar una lámpara de señalización (opcional) de 230 voltios en los bornes D1 y D2

CONECTOR X5 fotocélula (opcion incluida) y finales de carrera precableados en fabrica.
Si se instala la fotocélula quitar el puente de cable que une los bornes GND y IR, si no se instala el puente debe dejarse.
Conectar la fotocélula como se indica capítulo correspondiente.

CONECTOR X7 comando exterior por contacto, opcionales.

PROGRAMACION Y USO

Activacion del motor

El motor puede ser comandado por pulsadores exteriores de dos formas :

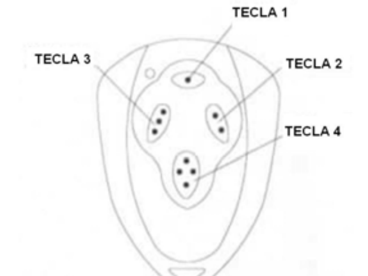
- Un solo pulsador con función paso a paso : una pulsacion abre, la siguiente para, la siguiente cierra, la siguiente para y asi sucesivamente.
- Tres pulsadores, uno par abrir, otro para parar y el tercero para cerrar.

Si se usa un solo pulsador conectarlo entre los bornes CLS y COM.
Si se usan tres pulsadores conectar el de abrir a OPN y COM, el de cerrar a CLS y COM y el de parar a STP y COM.

En caso de no usarse, y comandar el motor solo con mando a distancia, dejar las conexiones abiertas.

Emisores

Los emisores funcionan en modo paso a paso con un solo pulsador.
El circuito de control del motor puede memorizar hasta 25 emisores.
Una pulsación abre, la siguiente para, la siguiente cierra, la siguiente para y asi sucesivamente.
Puede programar cualquiera de los pulsadores del emisor, o varios.



Programacion de emisores (aprendizaje).

Quitar la cubierta del motor.
Pulsar el pulsador AN1 del circuito de control.
La luz LED2 de la placa de control hace un destello y empieza a hacer intermitencias lentas.
Pulsar la tecla del emisor que quiere usar para activar el motor. La luz LED2 se apaga
Volver a pulsar la tecla del emisor que quiere usar para activar el motor. La luz LED2 hace carias intermitencias más rápidas y se apaga
La programación ha terminado. El motor funciona con el emisor

Borrado de emisores

El proceso de borrado elimina todos los emisores de la memoria del motor. No se pueden borrar emisores individualmente.
Pulsar el pulsador AN1 del circuito de control y mantenerlo pulsado. La luz LED2 se enciende. Suelte el pulsador cuando la luz se haya apagado.
Los emisores han sido borrados.

Direccion del motor

Si se quiere usar la función de cierre automático o instalar fotocélula se debe verificar que la dirección del motor sea correcta.
Si activando la función de cierre automático la puerta abre sola en lugar de cerrar sola, o si la fotocélula actua cuando la puerta abre y hace que se vuelva a cerrar, se debe invertir la dirección del motor.
Para invertir la direccion del motor

- Intercambie los cables **U** y **W** de la conexión del circuito al bloque motor
- Intercambie los cables **OPLM** y **CLLM** de la conexión del circuito a los finales de carrera

Regulación de fuerza

Ajuste el regulador TR1 para adecuar la fuerza que hace el motor a la necesaria para mover su puerta.

Girando en sentido horario se incrementa la fuerza y en sentido antihorario se disminuye.

No se debe ajustar una fuerza excesiva para evitar que el motor cause daños si la puerta encentra un obstáculo en el movimiento.
La puerta tiene que poderse parar con una mano por una persona sin hacer una fuerza excesiva.

Ajustes adicioneles

Ajuste los microinterruptores de programación a sus necesidades segun la siguiente tabla

Microinterruptor	Posicion	Function
1	ON	Funcionamiento con tres pulsadores
	OFF	Funcionamiento con un pulsador

Microinterruptor	2	3	Function
Posicion	ON	ON	Sin cierre automatico
	ON	OFF	Cierre en 20 segundos
	OFF	ON	Cierre en 40 segundos
	OFF	OFF	Cierre en un minuto

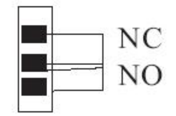
FOTOCELULA

La fotocélula se compone de dos piezas
Emisor - con dos bornes de conexión
Receptor - con cuatro bornes de conexion

Se situa cada una de las partes en un extremo de la puerta enfrentada una a la otra. El emisor emite un rayo infrarojo invisible que el receptor recibe.
Si un obstáculo (una persona, un vehiculo...) interrumpe el rayo se detecta y el receptor envia una señal al motor.
Con la fotocélula instalada, si se interpone un obstaculo en el recorrido de la puerta durante el cierre la puerta vuelve a abrir.

Receptor fotocelula
Emisor fotocelula
Motor
X5
24VDC
GND
I.R

Conectar la fotocélula segun el esquema adjunto.

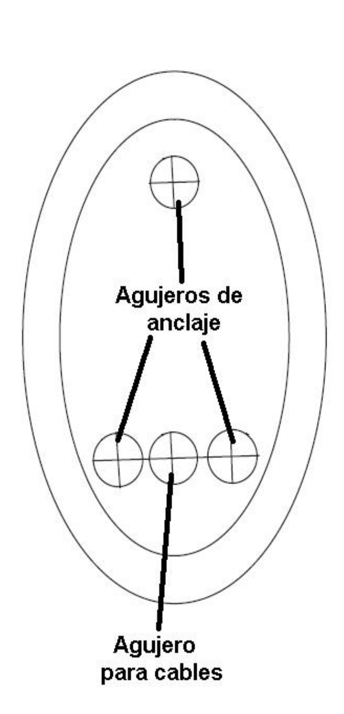


Asegurese que el selector de contacto de la fotocélula este en la posición NC. El selector es un puente extraible que esta en el receptor.

En el emisor hay un indicador luminoso que debe permanecer encendido siempre, indica la conexión correcta de la alimentación.

En el receptor hay dos indicadores luminosos. El primero debe permanecer encendido siempre, indica la conexión correcta de la alimentación. El segundo indica la presencia de obstáculo. Permanece apagado cuando no ningun obstáculo interrumpe el rayo infrarojo y se enciende cuando hay un obstáculo.

Durante la instalación asegúrese que el segundo indicador del receptor permanezca apagado sin ningun obstáculo. Esto indica que el emisor y el receptor esta correctamente alineados.



DECLARACIONES DE CONFORMIDAD



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Postcode: CF11 6AH
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VERIFICATION OF EMC COMPLIANCE

-ELECTROMAGNETIC COMPATIBILITY DIRECTIVE-

Certificate ID:81088996

Verification No.	:	EMC110809-02
Product Name	:	Sliding Gate Operator
Model Number	:	PY600AC/PY600DC/SL600AC/SL600DC/PY600AC(U)/SL600AC(U)
Product Character	:	AC220V, 50Hz, Rated output power of motor 200W
Applicant	:	TONGXIANG JOY SCIENTIFIC & TECHNOLOGICAL ELECTRONICS CO., LTD
Address of Application	:	1488 Fazhan Road, Tongxiang, Zhejiang 314500, China
Test Report No.	:	LDGB-EMC-11080902
Date of Issue	:	August 9, 2011
Applicable Standards	:	EN 55014-1:2006+ A1:2009 EN 55014-2:1997+A1:2001 EN 61000-3-2:2006 +A2:2009 & EN 61000-3-3:2006

Conclusion

Based upon a review of the worksheets and the Test report File according to 2004/108/EC Dire ctive. the apparatus is deemed to meet the requirements of the above standards and hence fulfils the requirements of:

Electromagnetic Compatibility Directive 2004/108/EC

Note

The Verification Is Only Valid With The Report No.LDBG-EMC-11080902



Authorized Signatory

Kinglan
For Chief Executive

COMPANY INTRODUCTION

LANDER experts in testing and certification for industrial product and commodity. We provide testing and service for enterprises with convenient style by our outstanding intelligence and technology knowledge, and testing for toxic substances, textile, food contact material, electric appliance etc. LANDER is the third party possessed of just position and professional verification. We work hard and gain the trust of customer.

Our laboratory operates according to ISO/IEC 17025. In general, you will recognize that our service is of high quality and facility during the whole process.

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For food testing

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VERIFICATION OF LVD COMPLIANCE

-LOW VOLTAGE DIRECTIVE-

Certificate ID:81088999

Verification No.	:	LVD110809-01
Product Name	:	Sliding Gate Operator
Model Number	:	PY600AC、SL600AC、SPY600AC(U)、SL600AC(U)
Product Character	:	AC220V, 50Hz, Rated output power of motor 200W
Applicant	:	TONGXIANG JOY SCIENTIFIC & TECHNOLOGICAL ELECTRONICS CO., LTD
Address of Application	:	1488 Fazhan Road, Tongxiang, Zhejiang 314500, China
Test Report No.	:	LDGB-SS-11080901
Date of Issue	:	August 9, 2011
Applicable Standards	:	IEC60335-1:2006 & IEC 60335-2-103:2006 Part 2-103: Particular requirements for drives for gates, doors and windows

Conclusion

Based upon a review of the worksheets and the Test report File according to 2006/95/EC Dire ctive. the apparatus is deemed to meet the requirements of the above standards and hence fulfils the requirements of:

Low Voltage Directive 2006/95/EC

Note

The Verification Is Only Valid With The Report No.LDBG-SS-11080901



Authorized Signatory

Kinglan
For Chief Executive



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KIT PORTÃO DE CORRER

Manual de utilização

MODELO 400





INCLUI TUDO O MATERIAL NECESSÁRIO
PARA AUTOMATIZAR
UM PORTÃO DE CORRER

ÍNDICE

ADVERTÊNCIAS IMPORTANTES

ANTES DE PROCEDER À INSTALAÇÃO E PROGRAMAÇÃO É ACONSELHÁVEL LER DETALHADAMENTE AS INSTRUÇÕES.

A AUTOMATIZAÇÃO DEVE SER REALIZADA EM CONFORMIDADE COM AS NORMAS EUROPEIAS EM VIGOR:
EN 60204-1 (Segurança da maquinaria. Equipamento eléctrico das máquinas, partes 1: regras generais).
EN 12445 (Segurança no uso de fechos automatizados, métodos de teste)
EN 12453 (Segurança no uso de fechos automatizados, requisitos)

• O instalador deve proporcionar a instalação de um dispositivo (ex. interruptor magneto térmico) que assegure o seccionamento omnipolar do dispositivo da rede de alimentação. A normativa requer uma separação dos contactos de pelo menos 3 mm. em cada pólo (EN 60335-1).

• Para a conexão de tubos rígidos ou flexíveis e passa cabos, utilizar manga térmica conformes o grau de protecção IP55 como a caixa de plástico que contem a placa.

• A instalação requer competências no campo eléctrico e mecânico; deve ser realizada unicamente por pessoal qualificado, no grau de passar a declaração de conformidade da instalação (Directiva máquinas 98/37/EEC, anexo IIA).

• É obrigatório obedecer às seguintes normas para fechos automatizados com passagem de veículos: EN 12453, EN 12445, EN 12978 e às eventuais normas nacionais.

• Inclusive a instalação eléctrica antes da automatização deve responder às normas vigentes e estar feita correctamente. O fabricante não se responsabiliza caso a instalação não responder às normativas vigentes.

• A regulação da força de tracção da folha deve medir-se com um instrumento adequado e regulada de acordo com os valores máximos admitidos pela normativa EN 12453.

• Está proibida a utilização do motor em ambientes poeirentos e atmosferas salinas ou explosivas.

O fabricante se reserva ao direito de efectuar eventuais modificações ao produto sem aviso prévio; mais, não se responsabiliza por danos a pessoas ou coisas devido a um uso impróprio ou a uma instalação errada.

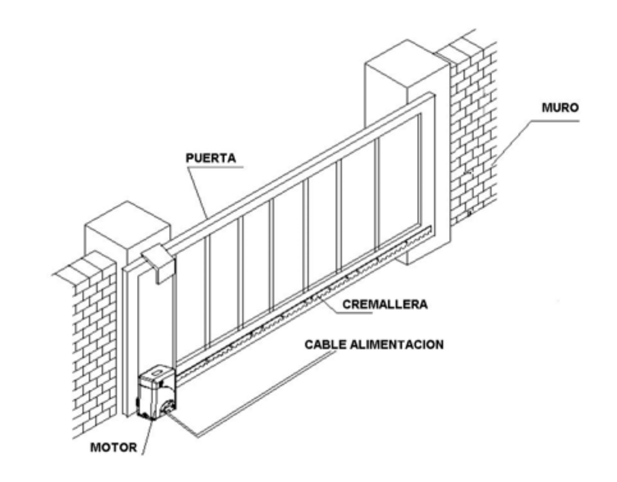
ESPECIFICAÇÕES TÉCNICAS

MOTOR CORRER 400		Comandos à distância	
Alimentação	220V. 50Hz	Frequência	433.92 MHz
Velocidade	13 m/min	Tipo de emissor	rolling code
Potência motor	200 W	Alimentação	PILA 12V. modelo 27A
Altura pignon saída	58.5 mm	FOTOCELULA	
Peso máximo porta	400 Kg	Tecnologia	Infravermelhos (940nm.)
Par de saída	16 Nm.	Alcance	10 metros
Fim de curso	Mecânico	Alimentação	12 a 24 V. DC/AC
Ruído	≤58 dB	Consumo	15mA.(RX)　30mA.(TX)
Frequência de uso	15 minutos	Relé de saída	1A. 30V.
Máximo emissores	20	Dimensões	49.2 x 76 x 21.6mm
Temperatura ambiente	-20°C~+50°C		

INSTALAÇÃO

O motor　PY600AC pode mover portas de correr de até 400 Kg de peso e 4 metros de comprimento se instalado correctamente.

O motor actua mediante uma guia dentada (cremalheira) que se coloca ao largo do portão. A figura anexa mostra o aspecto final da instalação.

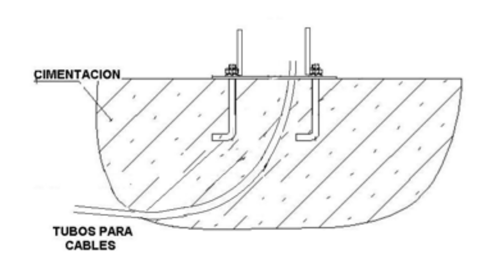


Preparação do Portão

Antes de instalar o motor assegure-se de que o portão se move com suavidade, está bem nivelado e não há obstáculos que dificultem o movimento.
A força necessária para mover o portão deve ser uniforme em todo o percurso.
O motor não se pode instalar em portas inclinadas.

Fundações

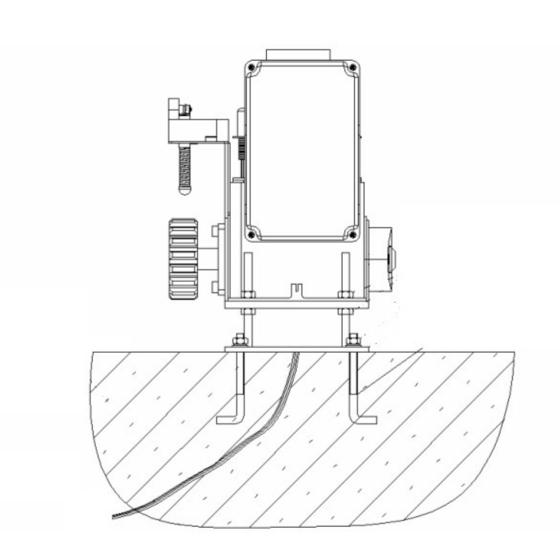
O motor requer uma base sólida em betão para assegurar a sua estabilidade.
A base de betão deve ser de pelo menos 450 x 300 milímetros e com 200 milímetros de profundidade.
Deve-se passar tubos para passagem de cabos de alimentação do motor e para a instalação de foto células e outros acessórios.



Colocar o betão no buraco e colocar a placa de fixação com as peças de chumbar no ângulo fornecido.
Usar porcas M8 para que as peças de chumbar não se afundem no betão.

ATENÇÃO: Certificar que a placa está bem nivelada e paralela ao portão

A placa deve ficar a 70 milímetros do portão

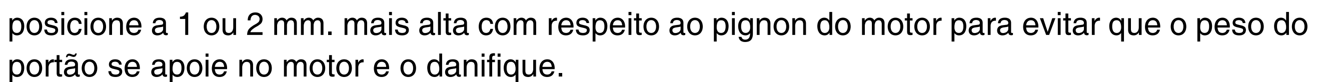


Quando o betão secar completamente, colocar o motor sobre a placa de fixação e fixá-lo com parafusos M8.
O uso da placa de fixação permite ajustar a altura do motor se for necessário.

Opcionalmente, se o solo é suficientemente sólido pode-se fixar a placa de fixação ao solo com parafusos metálicos ou outro sistema adequado para o tipo de solo.

Instalação da cremalheira

Desbloquear o motor como se indica no parágrafo *funcionamento manual* no final deste capítulo e posicionar a porta em posição totalmente aberta.
Fixar todos os elementos da cremalheira à porta, tendo o cuidado de manter toda ao mesmo nível, com
respeito ao pignon do motor.
É importante que a cremalheira se posicione a 1 ou 2 mm. mais alta com respeito ao pignon do motor para evitar que o peso do portão se apoie no motor e o danifique.



Para verificar desbloquear o motor e comprovar que o pignon tem um ligeiro jogo em relação à cremalheira em todo o percurso.

Instalação dos fins de curso



Instale as patilhas de fim de curso sobre a cremalheira como se mostra na imagem, de maneira que actuem sobre a mola do motor na posição em que o motor deve parar.
Tenha em conta que o portão pode mover-se alguns centímetros pela inércia adquirida depois do motor deixa de trabalhar. Ajuste os fins de curso uns centímetros antes do ponto

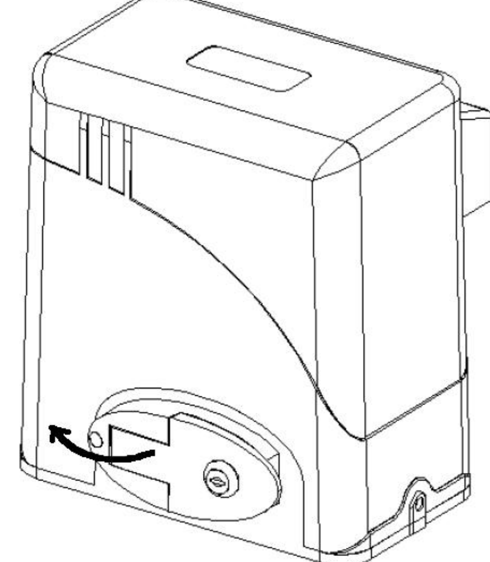
PUERTA
FINAL DE CARRERA
PATIN
PIÑON

de paragem desejada.

ATENÇÃO : Embora os fins de curso detenham o movimento do motor o portão deve ter um topo mecânico que impeça a porta de sair da guia.

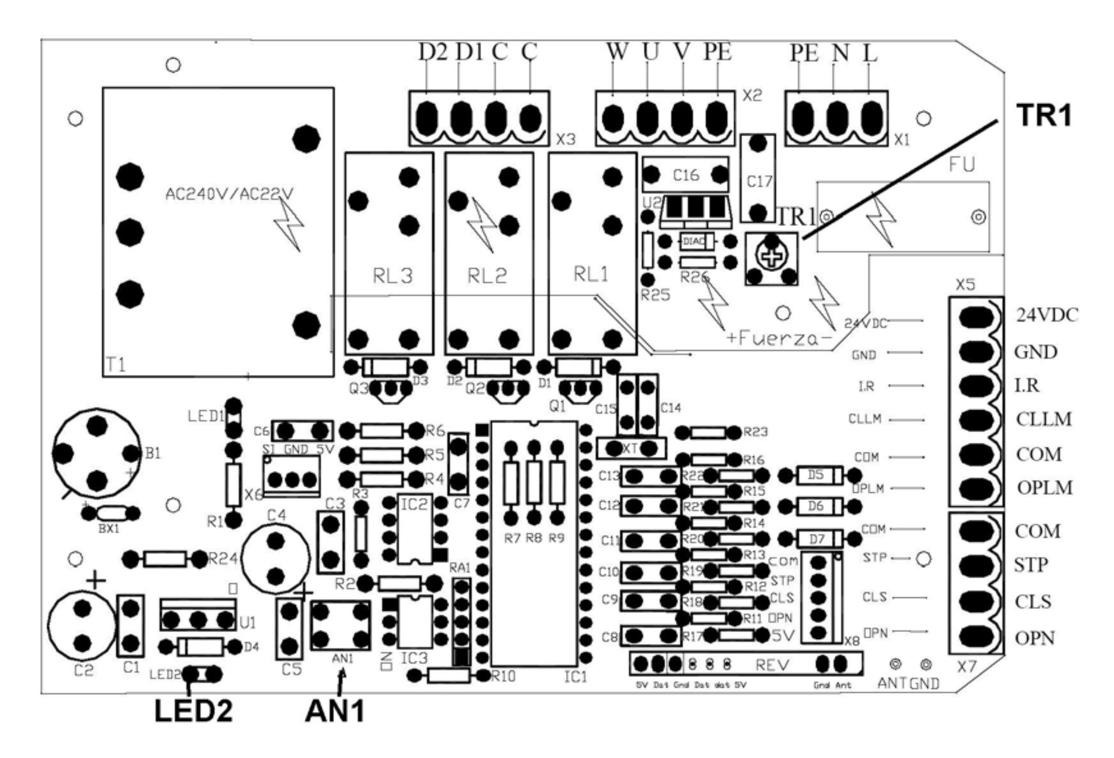
Funcionamento manual

Em caso de falta da rede eléctrica use a chave fornecida para desbloquear a alavanca da frente do motor.
Puxe a alavanca até fique a 90 graus da sua posição inicial.



NOTA : se o portão bater com força no topo mecânico de abertura, fica em esforço e o motor não é capaz de mover a porta. Neste caso deve desbloquear o motor e move-lo manualmente. Verifique os fins de curso e se for necessário mova-os para que actuem antes.

CONEXÕES ELÉCTRICAS



CONECTOR X1 alimentação
L - Fase 230V.
N - Neutro 230V.
PE - Terra

CONECTOR X2 motor, ligado de fabrica.
Conexões: terra (PE), comum do motor (V), e conexões de direcção de motor (U e W).

CONECTOR X3 condensador (C C) liagado de fábrica e luz de aviso.
Pode-se conectar um pirilampo de sinalização (opcional) de 230 volts nos bornes D1 y D2

CONECTOR X5 foto célula (opção incluída) e fins de curso ligados de fabrica.
Ao instalar-se foto célula, remover-se o chante que liga os bornes GND e IR, se não se instala o chante não se remove.
Conectar a foto célula como se indica no capítulo correspondente.

CONECTOR X7 comando exterior por contacto, opcional.

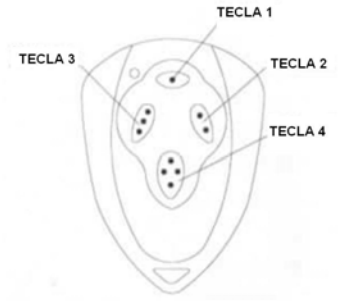
PROGRAMAÇÃO E USO

Activação do motor
O motor pode ser comandado por botões exteriores de duas formas:
- Um único botão com função passo a passo: uma impulso abre, outro pára, outro fecha, outro pára…… e assim sucessivamente.
- Três botões, um para abrir, outro para parar e o terceiro para fechar.

Se usa um único botão conectá-lo entre os bornes CLS e COM.
Se usa três botões conectar o de abrir a OPN e COM, o de fechar a CLS e COM e o de parar a STP e COM.

Em caso de se não usar, e comandar o motor apenas com comando à distância, deixar as conexões abertas.

Emissores
Os emissores funcionam em modo passo a passo com um único botão.
O circuito de controlo do motor pode memorizar até 25 emissores.
Um impulos abre, outro pára, outro fecha, outro pára…. e assim sucessivamente.
Pode programar qualquer dos botões do emissor, ou vários.




Programação de emissores (aprendizagem).
Remover o capot do motor.
Pulsar o botão AN1 do circuito de controlo.
A luz LED2 da placa de controlo faz um flash e começa a fazer intermitências lentas.
Premir a tecla do emissor que quer usar para activar o motor. A luz LED2 apaga-se.
Voltar a pulsar a tecla do emissor que quer usar para activar o motor. A luz LED2 faz varias intermitências mais rápidas e apaga-se.
A programação está terminada. O motor funciona com o emissor.

Eliminar emissores
O processo de eliminar, apaga todos os emissores da memoria do motor. Não se podem apagar emissores individualmente.
Premir o botão AN1 do circuito de controle e mantê-lo premido. A luz LED2 acende. Solte o botão quando a luz apagar.
Os emissores foram eliminados.

Direccion del motor
Se desejar utilizar a função de fecho automático ou instalar foto células deve verificar se a direcção da porta está correcta.
Ao activar a função de fecho automático a porta abre sozinha em vez de fechar sozinha, ou se a foto célula actua quando a porta esta abrir em vez de actuar quando esta a fechar, **tem de se inverter sentido do motor**.
Para inverter a direcção do motor.
-Inverter os cabos **U** e **W** na ligação do circuito do motor.
- Inverter os cabos **OPLM** y **CLLM** da ligação do circuito dos fins de curso.

Regulação de força

Ajuste o potenciometro TR1 para ajustar a força necessária para o motor mover a porta.

Girando no sentido horário aumenta-se a força e em sentido antihorario se diminui.

Não se deve ajustar uma força excessiva para evitar que o motor cause danos, se a porta encontra um obstáculo durante o movimento.
A porta tem que poder parar-se com uma mão por uma pessoa, sem fazer uma força excessiva.

Ajustes adicionais

Ajuste os micro interruptores de programação as suas necessidades, conforme a seguinte tabela

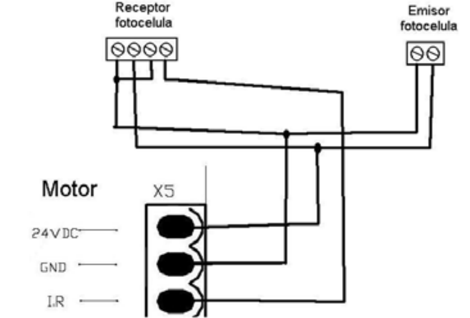
Microinterruptor	Posição	Função
1	ON	Funcionamento com três botões
	OFF	Funcionamento com um botão

Microinterruptor	2	3	Função
Posição	ON	ON	Sem Fecho automático
	ON	OFF	Fecho automático 20 segundos
	OFF	ON	Fecho automático 40 segundos
	OFF	OFF	Fecho automático um minuto

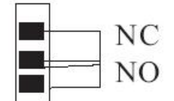
FOTOCELULA

A foto célula é composta por duas peças.
Emissor - com dois bornes de ligação
Receptor - com quatro bornes de ligação

As duas peças situam-se nos extremos da porta (pilares) em frente uma a outra. O emissor emite um raio infravermelho invisível que o receptor recebe.
Se um obstáculo (pessoa, veiculo…) interrompe o raio, o receptor envia um sinal ao motor. Se isto acontece quando a porta esta a fechar, a porta vai inverter o sentido(abre), para não atingir o obstáculo.



Ligar a foto célula segundo os esquema seguinte

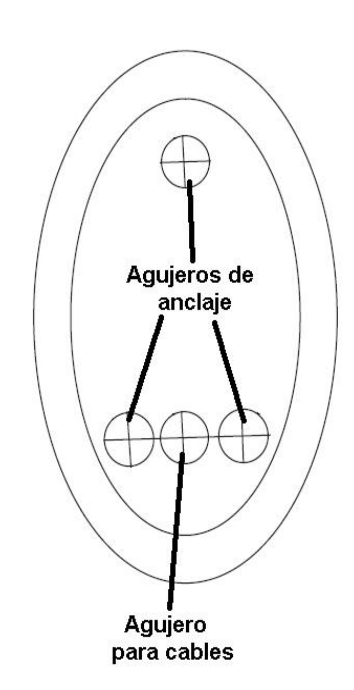


Verificar que o selector do contacto da foto célula esta em posição NC. O selector é um chante removível que está na célula receptora.

No emissor há um indicador luminoso que deve estar sempre aceso , indica a ligação correcta da alimentação.

Na receptora ha domus indicadores luminosos. O primeiro deve estar sempre aceso, indica a ligação correcta da alimentação. O segundo indica a presença do obstáculo. Permanece apagado quando nenhum obstáculo esta a interromper o raio infravermelho, acende-se quando existe um obstáculo a interromper o raio infravermelho.

Durante a instalação verifique que o segundo indicador luminoso permanece apagado sem nenhum obstáculo. Isto indica que o emissor e receptor estão correctamente alinhados.



DECLARAÇÕES DE CONFORMIDADE



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VERIFICATION OF EMC COMPLIANCE

-ELECTROMAGNETIC COMPATIBILITY DIRECTIVE-

Certificate ID:81088996

Verification No.	:	EMC110809-02
Product Name	:	Sliding Gate Operator
Model Number	:	PY600AC/PY600DC/SL600AC/SL600DC/PY600AC(U)/SL600AC(U)
Product Character	:	AC220V, 50Hz, Rated output power of motor 200W
Applicant	:	TONGXIANG JOY SCIENTIFIC & TECHNOLOGICAL ELECTRONICS CO., LTD
Address of Application	:	1488 Fazhan Road, Tongxiang, Zhejiang 314500, China
Test Report No.	:	LDGB-EMC-11080902
Date of Issue	:	August 9, 2011
Applicable Standards	:	EN 55014-1:2006+ A1:2009 EN 55014-2:1997+A1:2001 EN 61000-3-2:2006 +A2:2009 & EN 61000-3-3:2006

Conclusion

Based upon a review of the worksheets and the Test report File according to 2004/108/EC Dire ctive. the apparatus is deemed to meet the requirements of the above standards and hence fulfils the requirements of:

Electromagnetic Compatibility Directive 2004/108/EC

Note

The Verification Is Only Valid With The Report No.LDBG-EMC-11080902



Authorized Signatory

Kinglan
For Chief Executive

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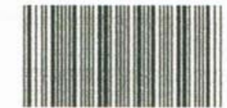
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VERIFICATION OF LVD COMPLIANCE

-LOW VOLTAGE DIRECTIVE-

Certificate ID:81088999

Verification No.	:	LVD110809-01
Product Name	:	Sliding Gate Operator
Model Number	:	PY600AC、SL600AC、SPY600AC(U) 、SL600AC(U)
Product Character	:	AC220V, 50Hz, Rated output power of motor 200W
Applicant	:	TONGXIANG JOY SCIENTIFIC & TECHNOLOGICAL ELECTRONICS CO., LTD
Address of Application	:	1488 Fazhan Road, Tongxiang, Zhejiang 314500, China
Test Report No.	:	LDGB-SS-11080901
Date of Issue	:	August 9, 2011
Applicable Standards	:	IEC60335-1:2006 & IEC 60335-2-103:2006 Part 2-103: Particular requirements for drives for gates, doors and windows

Conclusion

Based upon a review of the worksheets and the Test report File according to 2006/95/EC Dire ctive. the apparatus is deemed to meet the requirements of the above standards and hence fulfils the requirements of:

Low Voltage Directive 2006/95/EC

Note

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Sliding Gate Operator
User's Manual

PY600AC

OUTLINE

1. Product introduction

Please read the instructions carefully before proceeding.
MCU is supplied to control the gate operator.
Keypad / single button interface.
Photo beam safety beam interface.
User can select Auto-close function.
Manual key release design for emergency purposes.

2. Important safety information

Carefully read and follow all safety precautions and warning before attempting to install and use this automatic gate operator.

Make sure the Power supply (AC220V or AC110V) of the gate operator is suitable for the power supply in your area.

3. Main technical specifications

Model	PY600AC	PY600ACU
Power supply	220V, 50Hz	110V, 60Hz
Motor speed	55rpm	66rpm
Rated output power of motor	200W	
Remote control operating distance	30m (Frequency:433.92MHz)	
Remote control mode	Single button	
Output shaft height	58.5mm	
Max. gate weight	600Kg	
Output torque	16N.m	
Limit switch	Spring limit / Magnetic limit	
Noise	≤58dB	
Duty cycle	S2, 15 minutes	
Extra remote control	20	
Environmental temperature	-20°C~+50°C	
Gate Move speed	13m/min	15m/min

4. Mechanical Installation

The PY600AC will handle gate weighting up to 600 kg and up to 8m/12m if the proper installation procedures have been followed.

The PY600AC gate operator operates by forcing a drive rack by a drive gear. The entire configuration is shown in the diagram below. The gate operator must be installed on the inside of the gate.

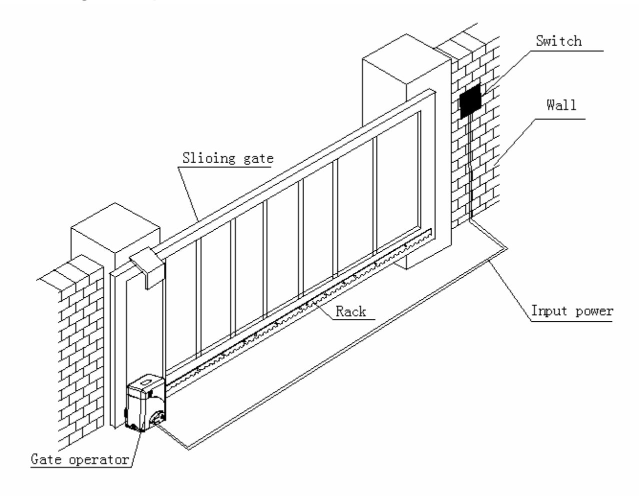


Fig.1

<u>Gate preparation</u>

Be sure the gate is properly installed and slides smoothly before installing the PY600AC sliding gate operator. The gate must be plumb, level, and move freely.

<u>Conduit</u>

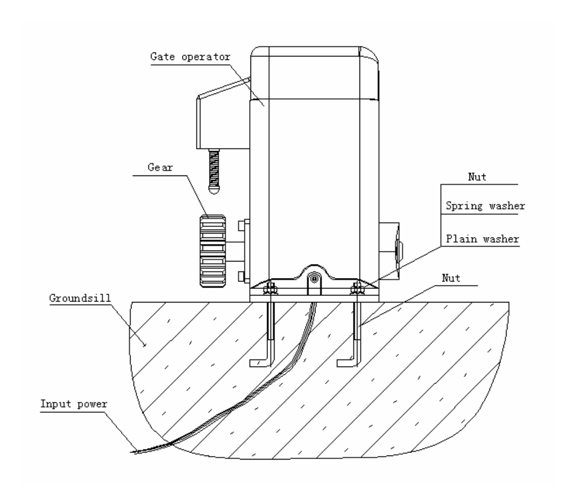
In order to protect the cable, use PVC conduit for low voltage power cable and control wires. Conduit must be preset into the concrete when it is poured. Wires within the conduit shall be located or protected so that no damage can result from contact with any rough or sharp part.

<u>Concrete pad</u>

The base unit of the gate operator requires a concrete pad in order to maintain proper stability. The concrete pad should be approximately 450mm x 300mm x 200mm deep in order to provide for adequate weight and structure to insure proper stable installation.

<u>Anchors</u> (see Fig.2)

You can use anchor bolts, anchors, washers and nuts. These anchors must be set into the concrete when it is poured or you can use wedge anchors to fasten the operator.



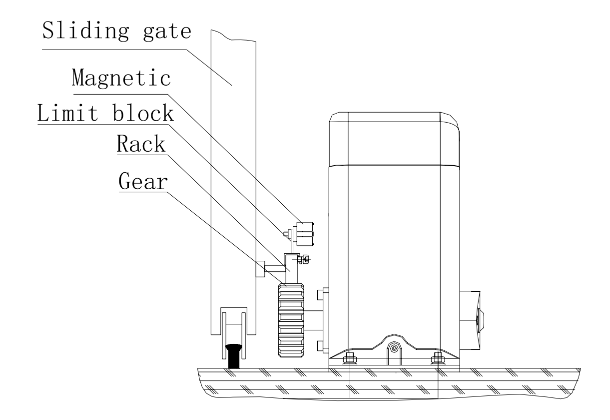


Fig.2

Operator installation dimension (see Fig.3)

After the concrete has hardened, mount the gate operator to the concrete pad. Check the operator and make sure it is lined up with the gate.

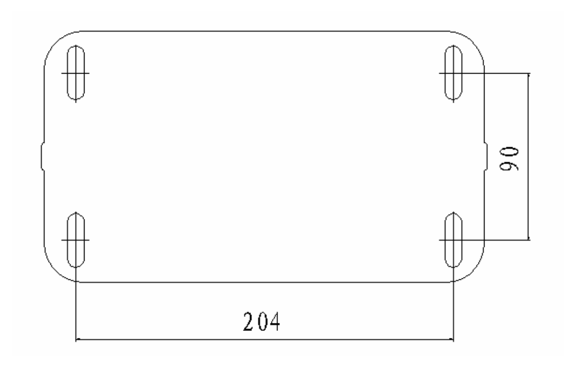


Fig.3

Installation of Rack

- Fix the three nuts (in the same package with rack) on the rack element.
- Lay the first piece of rack on the gear and weld the first nut on the gate.
- Move the gate manually, checking if the rack is resting on the gear, and weld the second and third nut.
- Bring another rack element near to the previous one. Move the gate manually and weld the three nuts as the first rack, thus proceeding until the gate is fully covered.
- When the rack has been installed, to ensure it meshes correctly with the gear.
- The space between rack and gear is about 0.5mm.

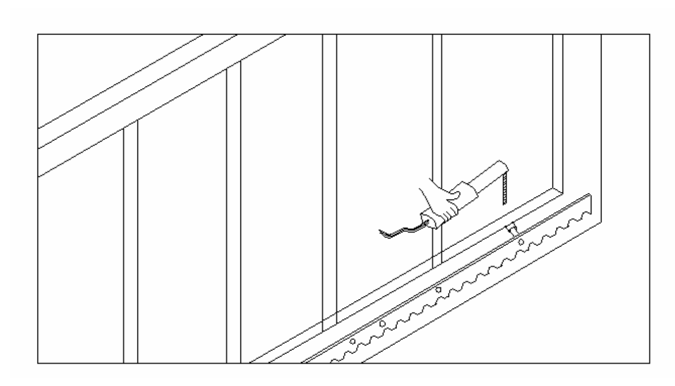


Fig.4

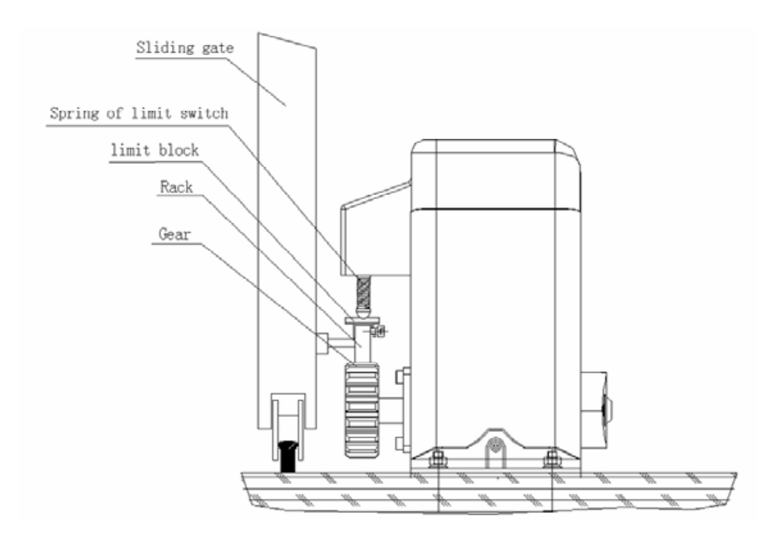
5. Adjustment

Spring limit switch

- To ensure safety, it is recommended to install limit switches at both ends of the gate to prevent the gate from sliding out of the rails. The rails must be installed horizontally.
- Install the limit block as shown in Fig.5 and Fig.6. The spring limit switch and blocks are used to control the position of the gate.
- Release the gear with the key and push the sliding gate manually to pre-determine the position, fix the block to the rack and lock the gear by push up the release bar. Moving the gate electrically, adjust the block to the proper position until the position of the opening and closing meet the requirement.

Magnetic limit switch

- To ensure safety, it is recommended to install limit switches at both ends of the gate to prevent the gate from sliding out of the rails. The rails must be installed horizontally.
- Install the limit block as shown in Fig.5 and Fig.6. The magnetic of limit switch and blocks are used to control the position of the gate.
- Release the gear with the key and push the sliding gate manually to pre-determine the position, fix the block to the rack and lock the gear by push up the release bar. Moving the gate electrically, adjust the block to the proper position until the position of the opening and closing meet the requirement.



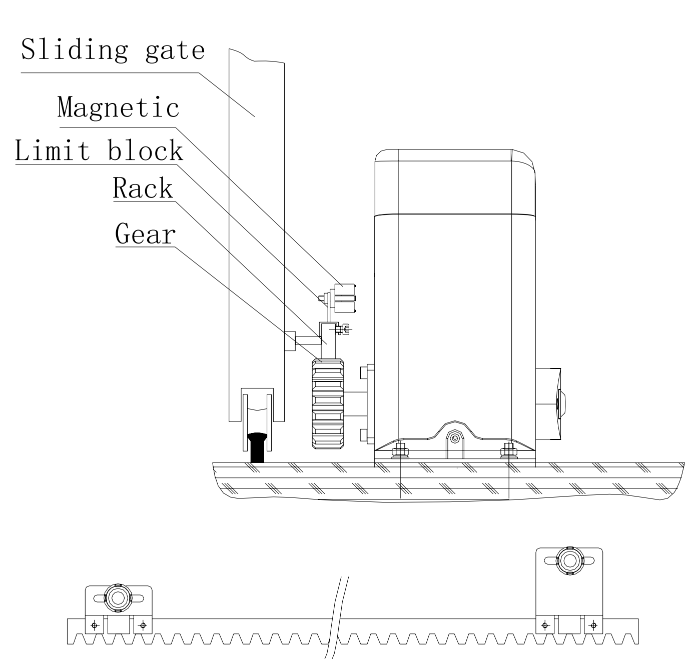


Fig.5

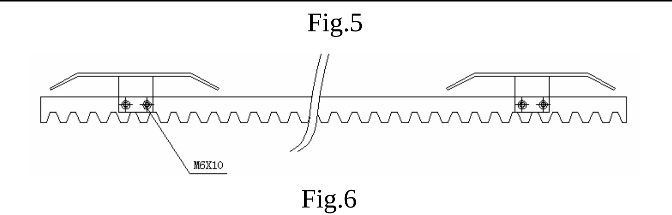


Fig.6

Manual operation

In case of power failure use key unlock the lock and pull down the release bar about 90 degree to open or close gate manually, use the release key as follow:

- Fit the supplied key in the lock.
- Turn the key and pull down the release bar about 90° to release the gear. (Note: Do not exceed 90°, be careful not to use too much force, otherwise the release bar will be damaged.)
- Open and close the gate manually.

Note: If the gate bumps the mounting post and cannot be electric opened, move the gate a few inches by hand, thus you can release the gate with the key, open and close the gate manually.

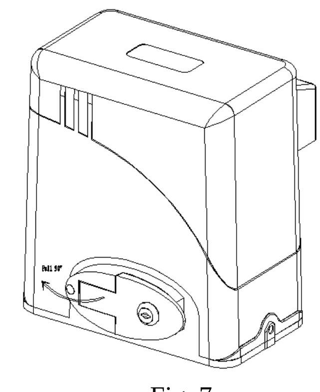


Fig. 7

6. Wire Connecting

Make sure that the power is OFF before making any electrical connections.

Remove the cover, perform the wiring (See Fig.8 and wiring notes for control board) and replace the cover again.

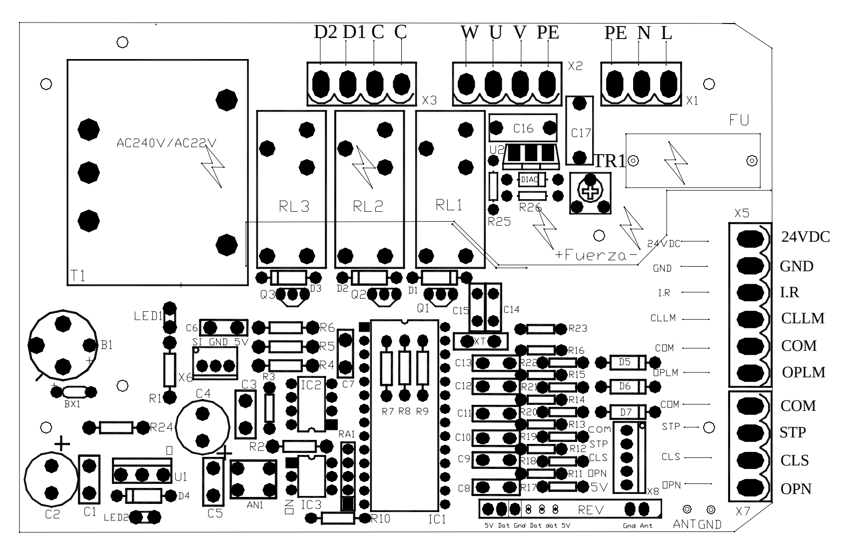


Fig.8

Wiring notes of control board

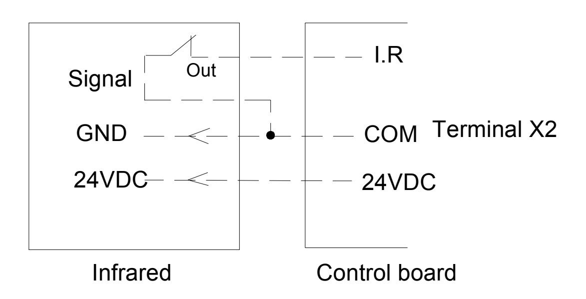
a. Power Input(X1): E (Earth),L (Live),N (Neutral).
PY600AC: AC220V
PY600ACU:AC110V

b. Caution light: connect caution light wire toD1 and D2(terminal X3)
PY600AC: AC220V

PY600ACU: AC110V

c. Output power supply: 24VDC, COM (COM), I.R. (N.C Infrared)

If the infrared beam is interrupted during closing, the gate will reverse and open immediately. The product is not factory equipped with an infrared device, the infrared output signal must be N.C.



Infrared with DC input

Fig.9 infrared schematic diagram

d. Three-button switch / single-button switch (keypad): The PY600AC is equipped with interfaces for three-button switch and single-button switch (keypad).

To install the keypad attach one lead of your keypad to ‘CLS’ of terminal X4 and the other to the ‘COM’. The keypad will function in single channel mode (the DIP switch 1 should be turn to OFF).

For three-button switch installation, use the terminals for multi-channel mode. Connect open wire of external button switch to ‘OPN’ of terminal X4, connect close wire of switch to ‘CLS’, connect stop wire of switch to ‘STP’, connect common wire of switch to ‘COM’.

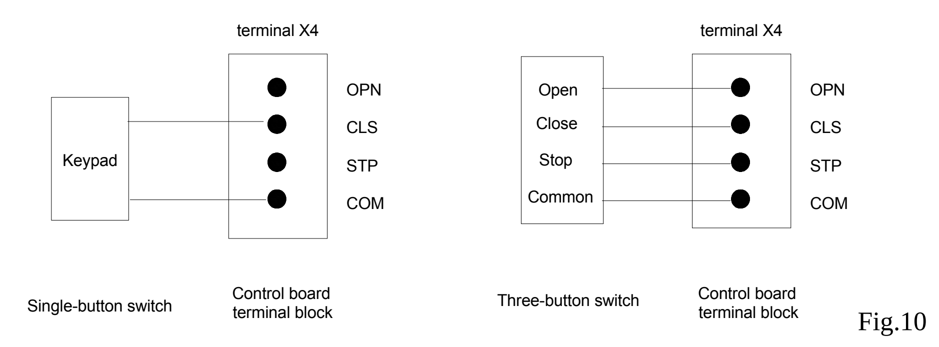
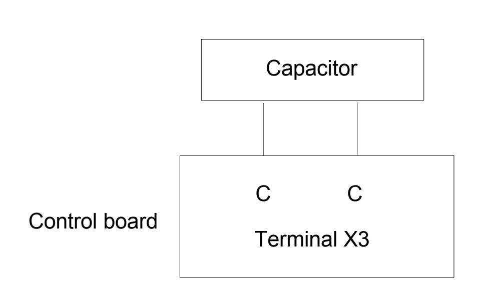


Fig.10

Motor and capacitor (Terminal X2, X3): V (com), U (Positive direction), W (Opposite direction), E (grounding), C (capacitor)



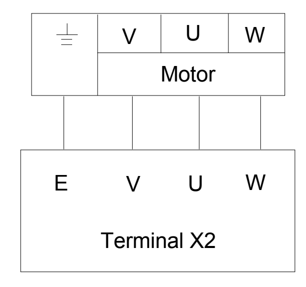


Fig.11

7. Tuning and operation

Remote control

- The remote control works in a single channel mode. It has four buttons. See Fig.12 Remote transmitter. The function of button 1, button 2、 button3 and button 4 are the same. With each press of the remote control button which has been programmed, the gate will close, stop, open or stop cycle.
- You can program/learn button 1, button 2, and button 3 individually. You also can program/learn two buttons or three buttons together, but you need repeat the program/learn process if you want to use more than one button.

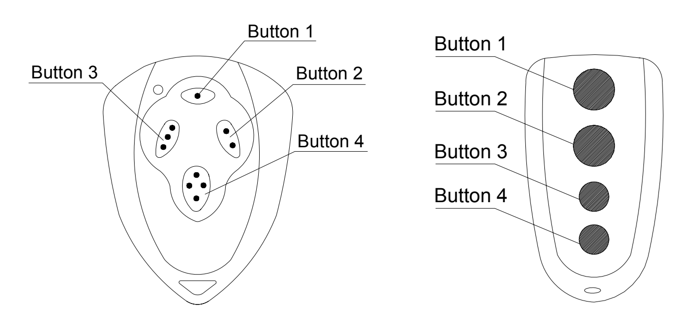


Fig.12 Remote transmitter

- Adding extra remote controls (Learn): Remove the cover, press the learn button 'AN1' (Fig.8), then the 'LED2' (Fig.8) will be on and turn off, then press the remote control button which you want to use, the 'LED2' will turn on about 2 seconds and then turn off again. The learning process is finished.
  Up to 25 remote controls may be used.
- Erase remote controls: To erase all existing remote controls, press and hold learn button 'AN1', the 'LED2' turns on, release the button once the 'LED2' turns off. This indicates that all the remote controls have been erased completely.
- **Note**: Press the 'OPEN' button of external button switch or remote control button which has been learned, the gate will open, the motor rotates clockwise, and the 'LED2' is turns on. The output voltage between 'D1 and D2' (terminal X3) is AC220V/110V, the voltage between 'V' and 'U' is AC220V/110V. Press 'STOP' button or the same remote control button, the gate stops running. And the 'LED2' is turns off. Then press 'CLOSE' button or the same remote control button again, the gate will close, the motor rotates anticlockwise, and the 'LED2' is turns on. The output voltage between 'D1 and D2' (terminal X3) is AC220V/110V, the voltage between 'V' and 'W' is AC220V/110V. Press the 'STOP' button or the same remote control button, the gate stops running. And the 'LED2' is turns off.
- Verify open direction: If the gate does not move in the desired direction, then you will need to reverse the motor operating direction, open the black plastic cover, you can do this by exchanging wires 'U' and 'W', 'OPLT' and 'CLLT'.
- Power regulation: according to your door weight, use screw driver can adjust the motor output power by adjust the TR1; adjust the TR1 the clockwise will increase the motor output power, adjust the TR1 the anticlockwise will reduce the motor output power.
  Adjust the TR1 and make sure the motor can working good, then turn a little angle more.

8. Programming Process

Table of the DIP-switch

Position	DIP-switch	Function SET
1	ON	Three-button switch
	OFF	Single-button switch (the CLS and COM), OPN and COM is “open door” function also.
2	ON	When the 2 and 3 all ON, the Controller haven’t Auto-close function. When the 2 ON and the 3 is OFF, auto-close time is near 20 Sec. when the 2 OFF and the 3 is ON auto-close time is near 40 sec. when the 2 and the 3 is all in position, the auto-close time is near 60 sec.
	OFF	
3	ON	
	OFF	

Note:

(1) You must follow the operating instruction as above, any wrong operation is not allowed during setting. If your device responds to your requested function correctly, you have set the function successfully, otherwise repeat the above setup instruction until your device responds to your expected function.

(2) **If the gate can not be moved, please check whether the gate is obstructed or the gate is too weight.**

Activities Covered in this section

- **Remote transmitter:** With each press of the button, the gate will close, stop, open or stop cycle. **(Single-button mode)**
- **Three-button mode external button switch (not supply):** press ‘OPEN’ button, the gate opens. Press ‘STOP’ button, the gate stops. Press ‘CLOSE’ button, the gate closes.
- **Single-button mode external button switch / keypad (not supply):** With each press of the button, the gate will close, stop, open or stop cycle.
- **Auto-close function:** This feature can be selected to make the gate stay open for some seconds before it automatically closes. The auto-close time can be adjusted to between 15, 30 and 45 seconds.
- **Safe guard (Infrared photocell):** If infrared beam is interrupted during closing, the gate will reverse and go open immediately. This feature will not function if the gate is in fully opened and closed positions or during opening.
- **Open priority:** The gate will return to open if press ‘OPEN’ button of external button switch during closing.
- **Limit switch:** The switch is used to accurately stop the gate in the opened and closed positions.
  If the gate stops at opened position when the limit switch is reached, the gate will not move if you press ‘OPEN’ button.
  If the gate stops at closed position when the limit switch is reached, the gate will not move if you press ‘CLOSE’ button.
- The device is installed with a thermal protector, the thermal protector will switch off the motor automatically in case of the temperature is higher than 120°C and switch on the motor automatically when the temperature is lower than 85°C±5 °C.

9. Maintenance

- Check the door once a month. The door should be carefully checked for balance. The door must be in good working order.
- We suggest for safety reasons, photocells be used on all gates.
- Disconnect from mains supply before replacing bulb.
- Be sure to read the entire manual before attempting to perform any installation or service to the door operator.
- Our company reserves the right to change the design and specification without prior notification.

10. Troubleshooting

Trouble	Possible causes	Solutions
The door fails to open and close. LED display does not light.	1. Power is OFF 2. Fuse burn	1. Make sure that power is ON. 2. Replace fuse.
The door can open, fails to close.	1. Infrared beam is obstructed. 2. Infrared photocell function is enable, but the photocell has not been installed.	1. Remove obstructions. 2. Make sure the infrared photocell function is disable.
Remote transmitter does not work.	1. Battery level may be low 2. Transmitter code is lost	1. Replace the battery inside the transmitter. 2. Re-program the transmitter.
The transmitter operating distance is too short.	Battery level may be low.	Replace battery.